

FIG. 1A

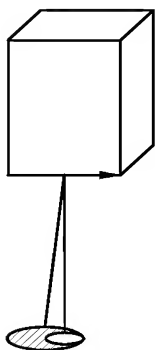


FIG. 1B

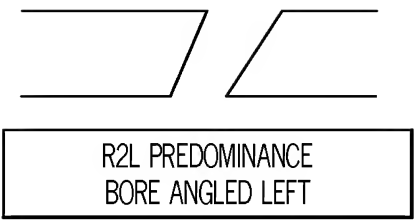


FIG. 1C

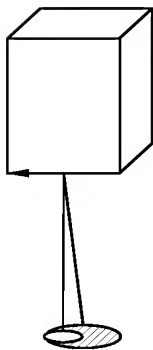


FIG. 2A

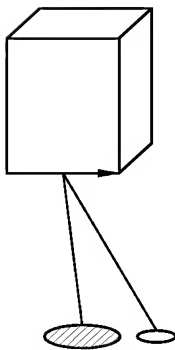


FIG. 2B

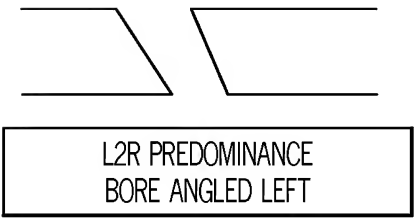


FIG. 2C

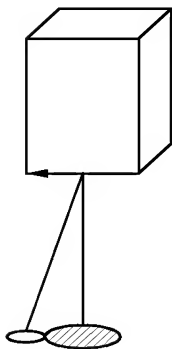


FIG. 3A

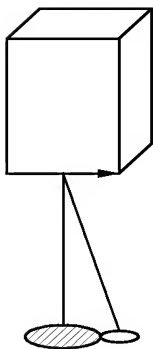


FIG. 3B

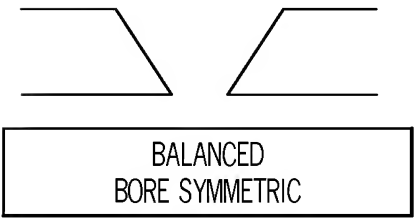


FIG. 3C

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	0.25	0	0.25	
Phi (DEGREES)	270	270	270	270	
X MISPLACEMENT (MICRONS)	60	83.33413	-60	-83.33413	OUTPUTS
Y MISPLACEMENT (MICRONS)	0	-4.363351	0	-4.363351	

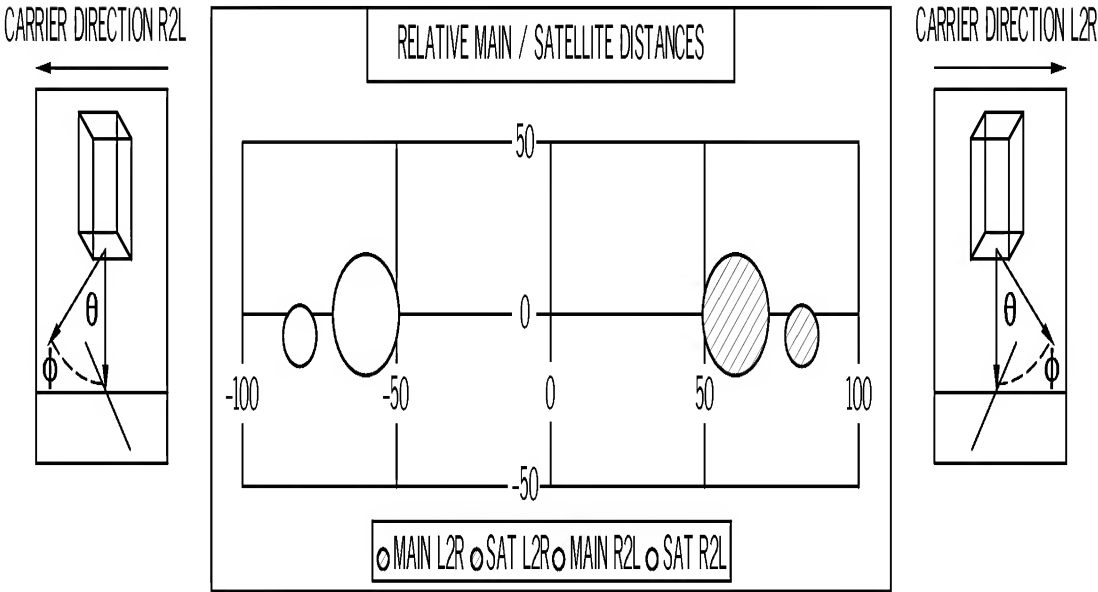


FIG. 4A

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L2R

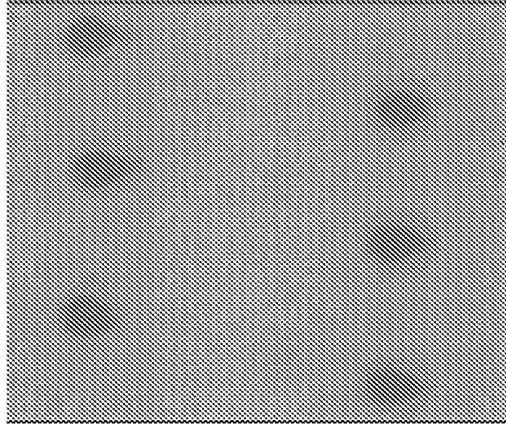


FIG. 4B

R2L

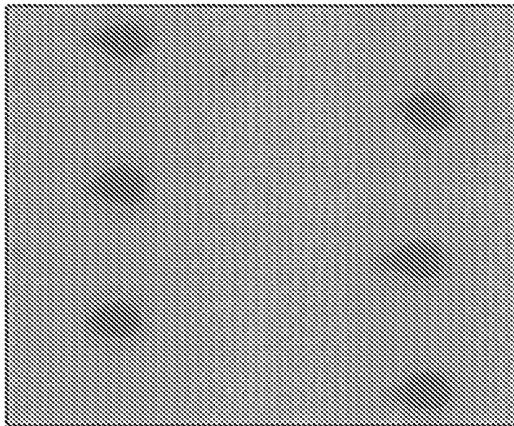


FIG. 4C

L2R

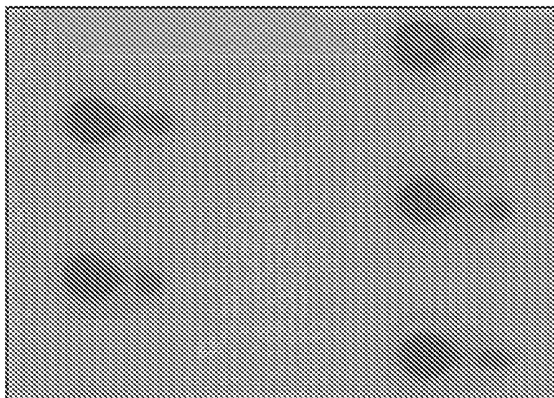


FIG. 5A

R2L

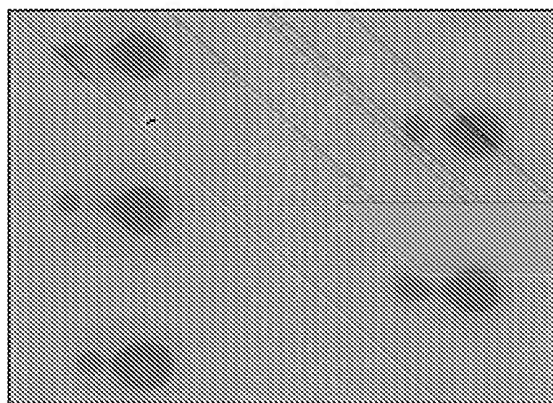


FIG. 5B

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	0.7	0	0.7	
Phi (DEGREES)	180	180	180	180	
X MISPLACEMENT (MICRONS)	60	71.12164	-60	-95.55747	OUPUTS
Y MISPLACEMENT (MICRONS)	0	1.5E-15	0	1.5E-15	

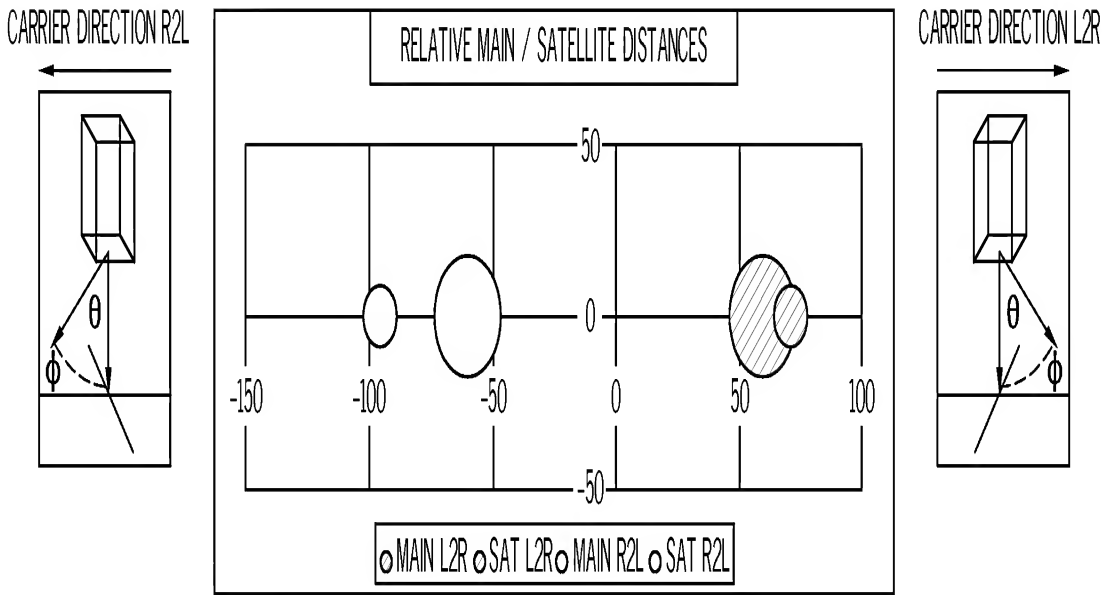


FIG. 6

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$
$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{yoffset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000
CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	0.7	0	0.7	
Phi (DEGREES)	180	180	180	180	
X MISPLACEMENT (MICRONS)	60	95.55747	-60	-71.12164	OUPUTS
Y MISPLACEMENT (MICRONS)	0	-1.5E-15	0	-1.5E-15	

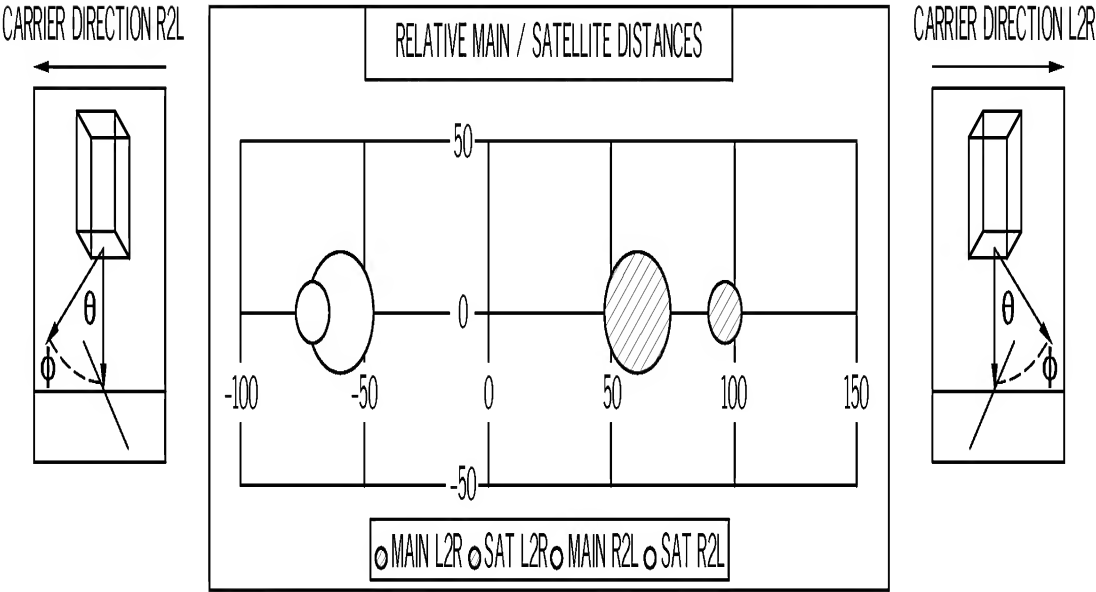


FIG. 7

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L2R

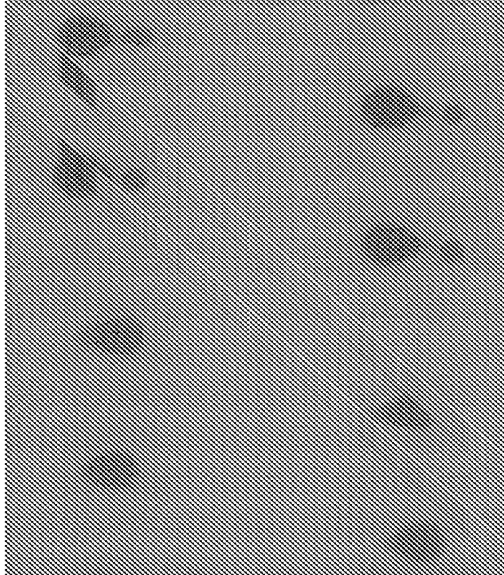


FIG. 8A

R2L

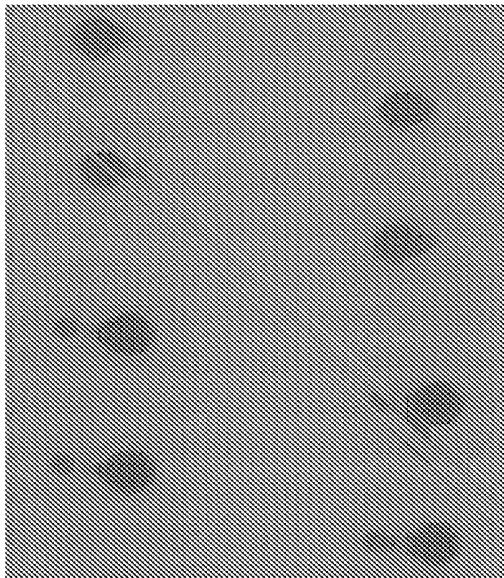


FIG. 8B

$$X \text{ MISPLACEMENT} = (GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)) + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	0.7	0	0.7	
Phi (DEGREES)	180	180	180	180	
X MISPLACEMENT (MICRONS)	60	71.12164	-60	-95.55747	OUTPUTS
Y MISPLACEMENT (MICRONS)	0	1.5E-15	0	1.5E-15	

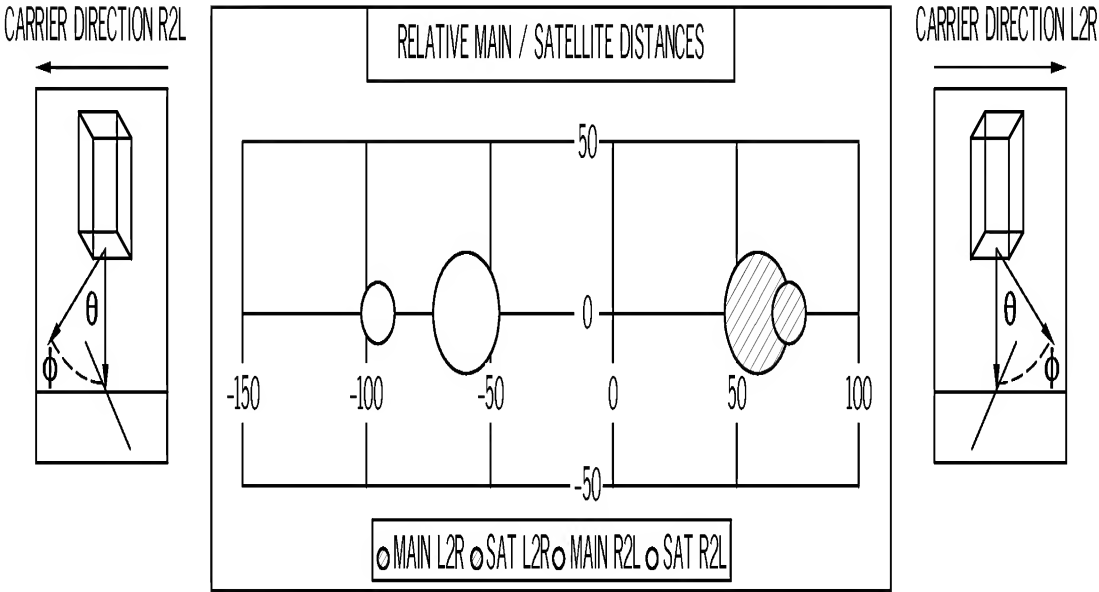


FIG. 9A

L2R

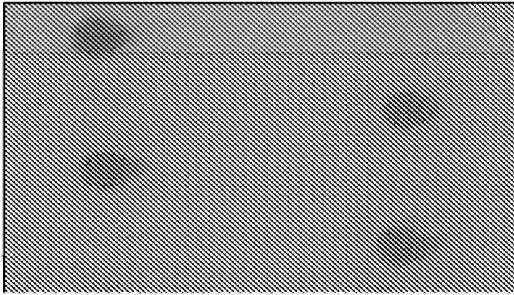


FIG. 9B

R2L

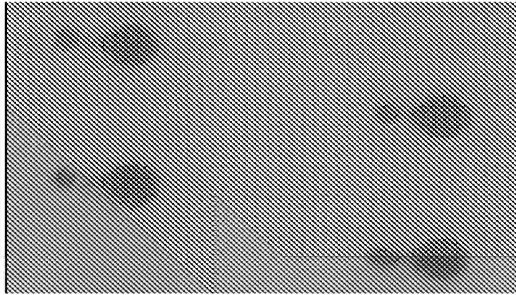


FIG. 9C

L2R

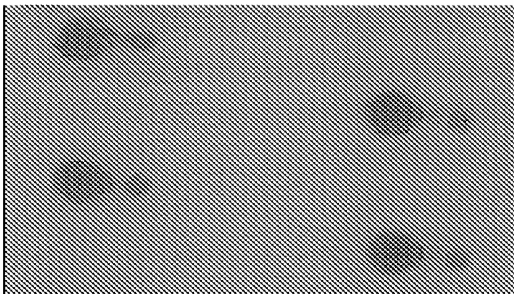


FIG. 10B

R2L

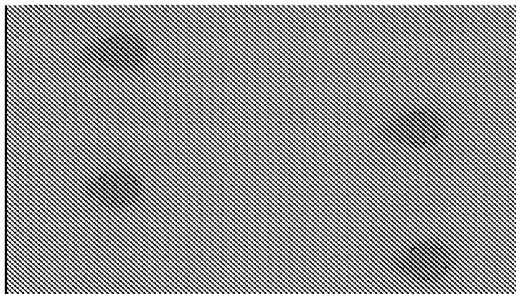


FIG. 10C

$$X \text{ MISPLACEMENT} = (GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)) + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	-0.7	0	-0.7	
Phi (DEGREES)	180	180	180	180	
X MISPLACEMENT (MICRONS)	60	95.55747	-60	-71.12164	OUTPUTS
Y MISPLACEMENT (MICRONS)	0	-1.5E-15	0	-1.5E-15	

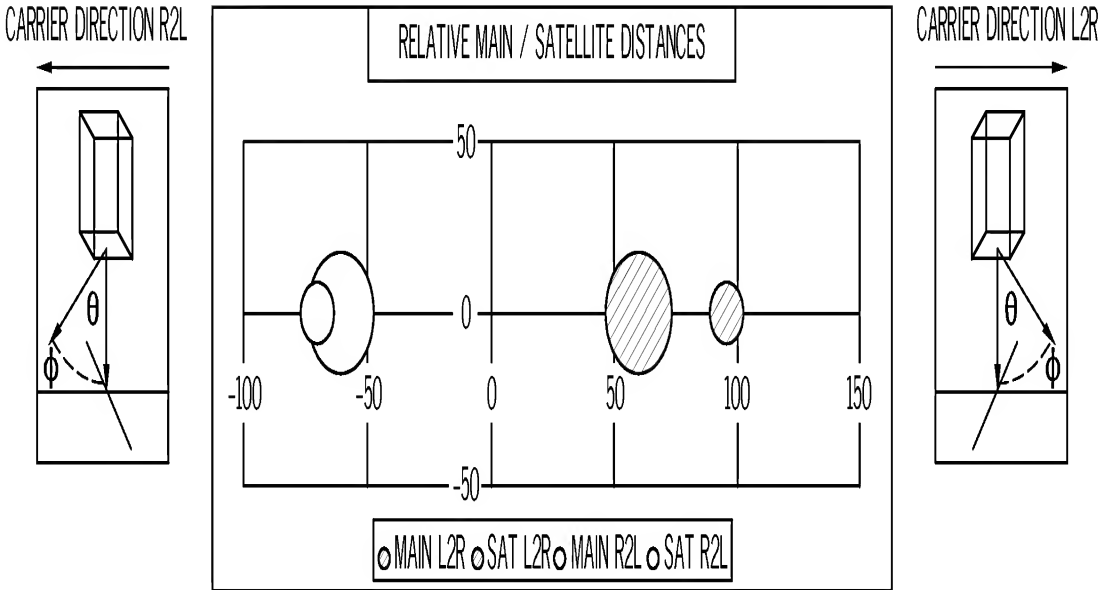


FIG. 10A

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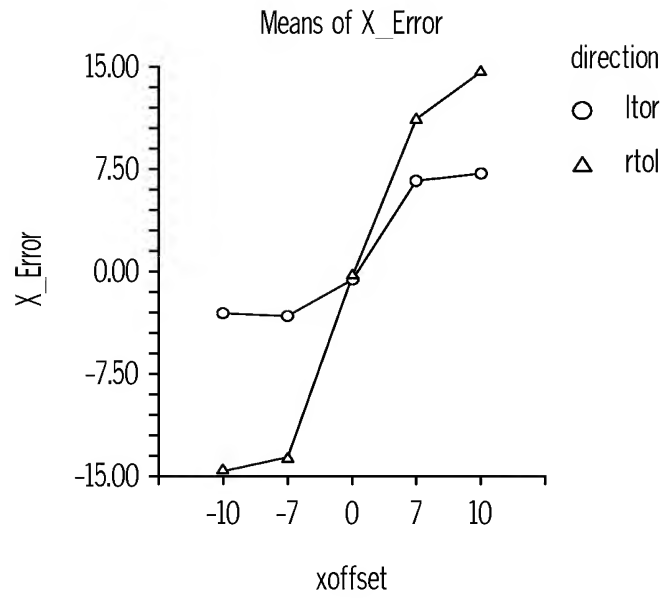


FIG. 11

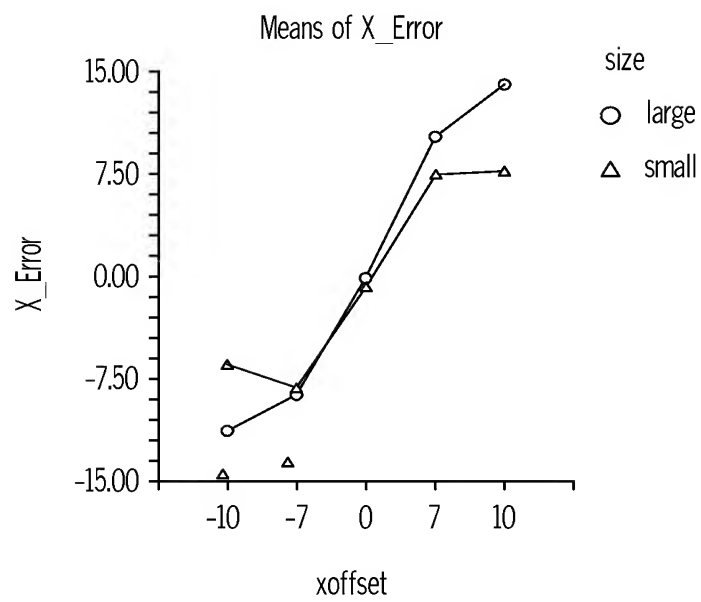


FIG. 12

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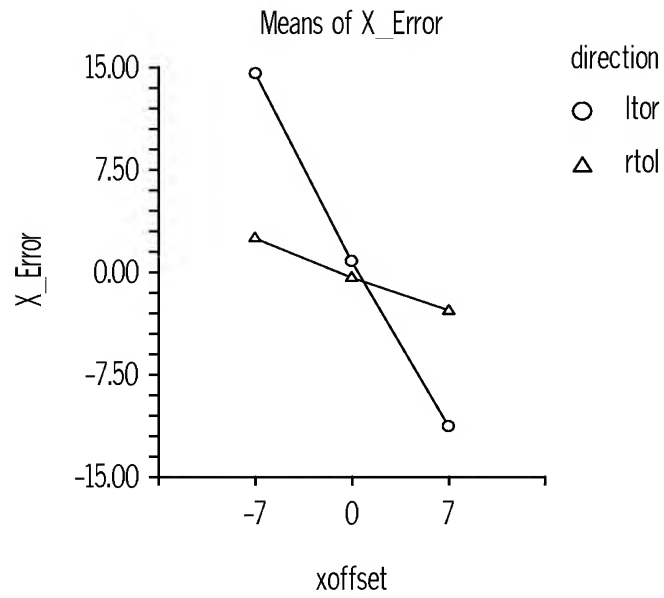


FIG. 13

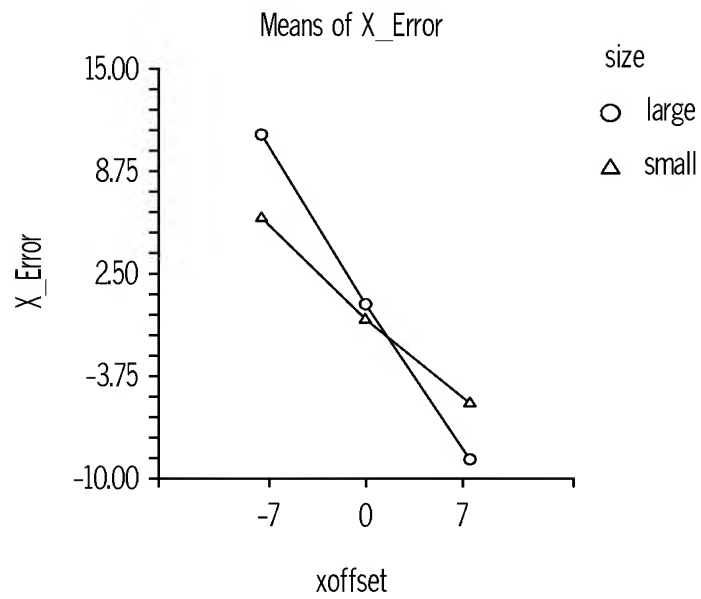


FIG. 14

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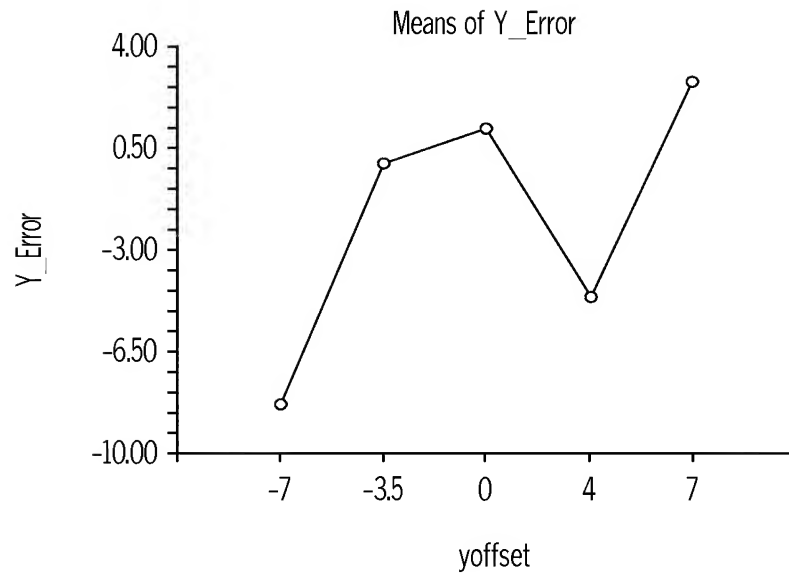


FIG. 15

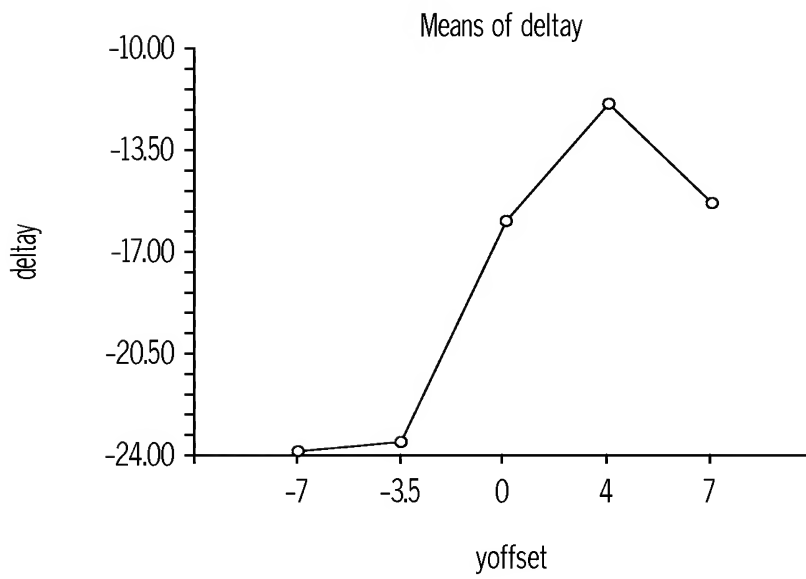


FIG. 16

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{yoffset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	1	1	1	1	
Phi (DEGREES)	180	180	180	180	
X MISPLACEMENT (MICRONS)	42.55407	65.89096	-77.4642	-100.8011	OUTPUTS
Y MISPLACEMENT (MICRONS)	2.14E-15	2.14E-15	2.14E-15	2.14E-15	

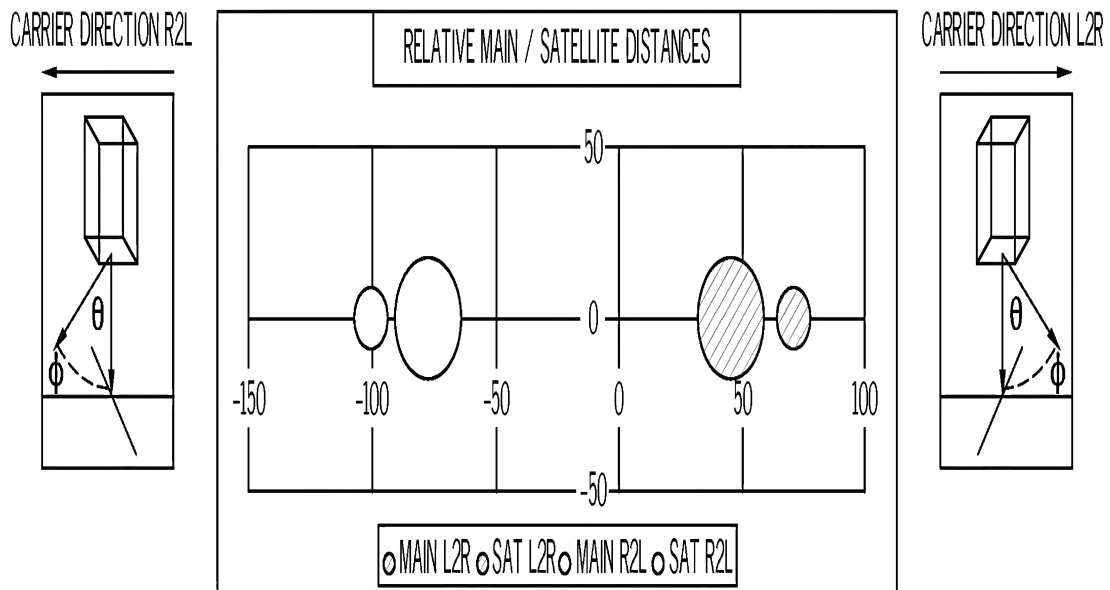


FIG. 17

$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$

$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$

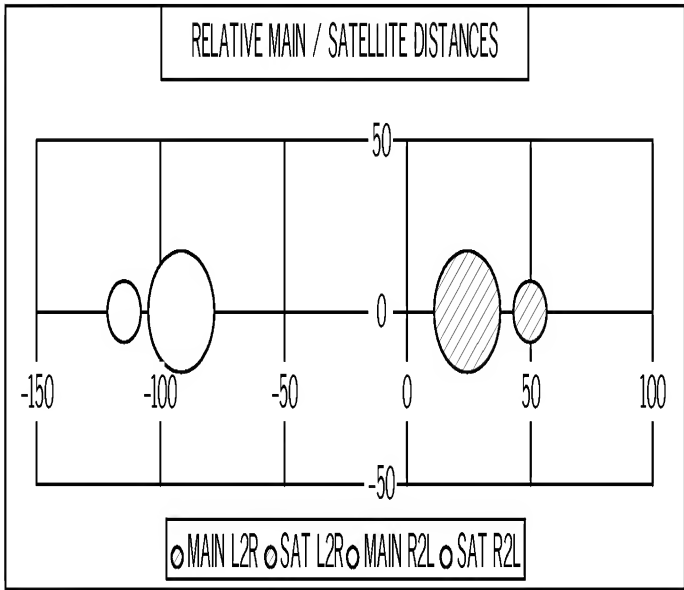
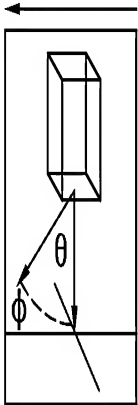
GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	-1	-1	-1	-1	
Phi (DEGREES)	180	180	180	180	
X MISPLACEMENT (MICRONS)	77.4642	100.8011	-42.55407	-65.89096	OUTPUTS
Y MISPLACEMENT (MICRONS)	-2.14E-15	-2.14E-15	-2.14E-15	-2.14E-15	

CARRIER DIRECTION R2L



CARRIER DIRECTION L2R

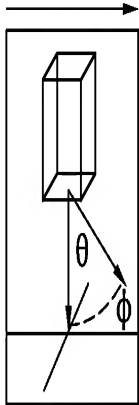


FIG. 18

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$
$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000
CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	-25	0	-25	
Phi (DEGREES)	0	90	0	90	
X MISPLACEMENT (MICRONS)	60	83.41272	-60	-83.41272	OUTPUTS
Y MISPLACEMENT (MICRONS)	0	-43.66094	0	-43.66094	

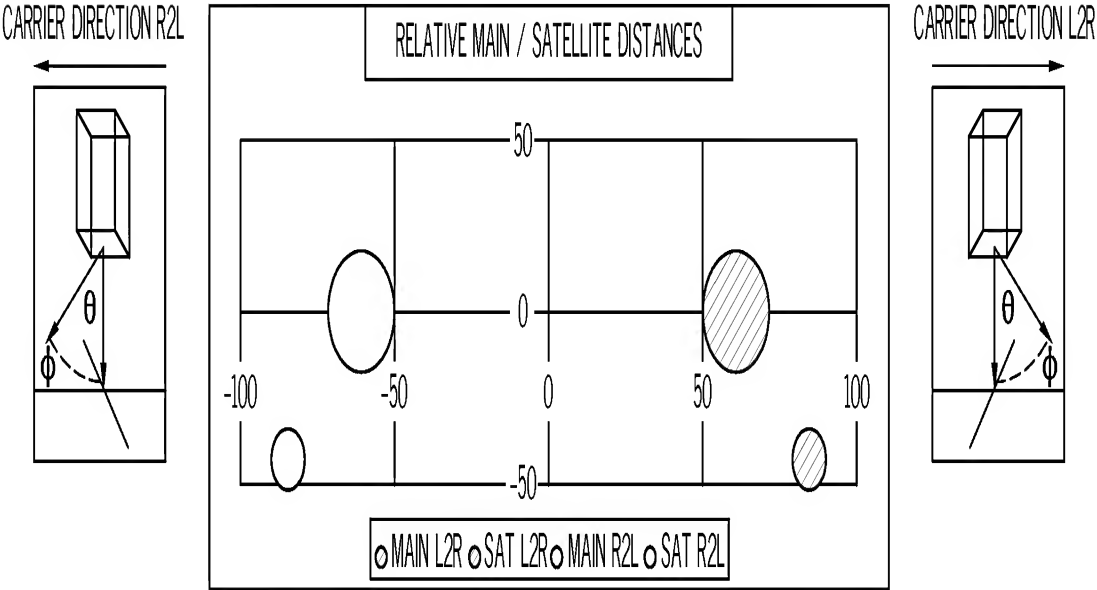


FIG. 19A

L2R

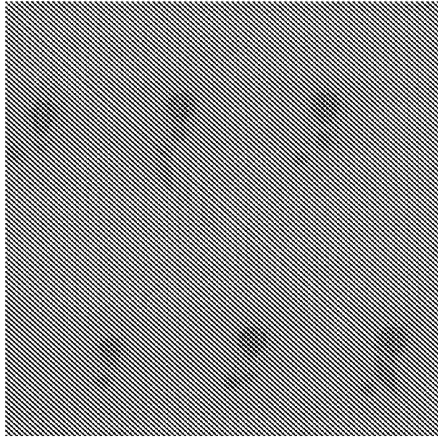


FIG. 19B

R2L

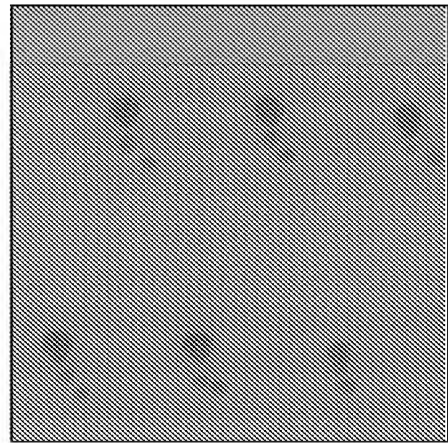


FIG. 19C

L2R

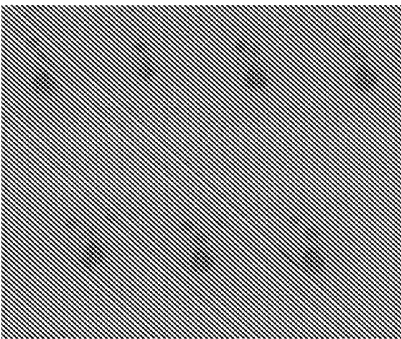


FIG. 20B

R2L

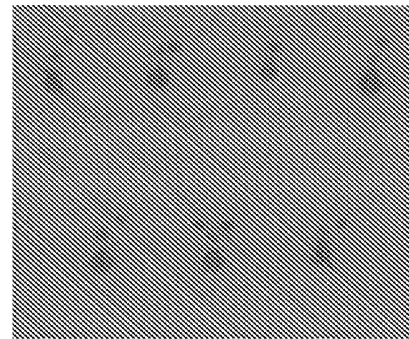


FIG. 20C

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\Theta) * \cos(\Phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\Theta) * \sin(\Phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		R2L		
	MAIN	SATELLITE	MAIN	SATELLITE	
JET VELOCITY (ips)	500	360	500	360	INPUTS
Theta (DEGREES)	0	25	0	25	
Phi (DEGREES)	0	90	0	90	
X MISPLACEMENT (MICRONS)	60	-83.41272	-60	83.41272	OUTPUTS
Y MISPLACEMENT (MICRONS)	0	43.66094	0	43.66094	

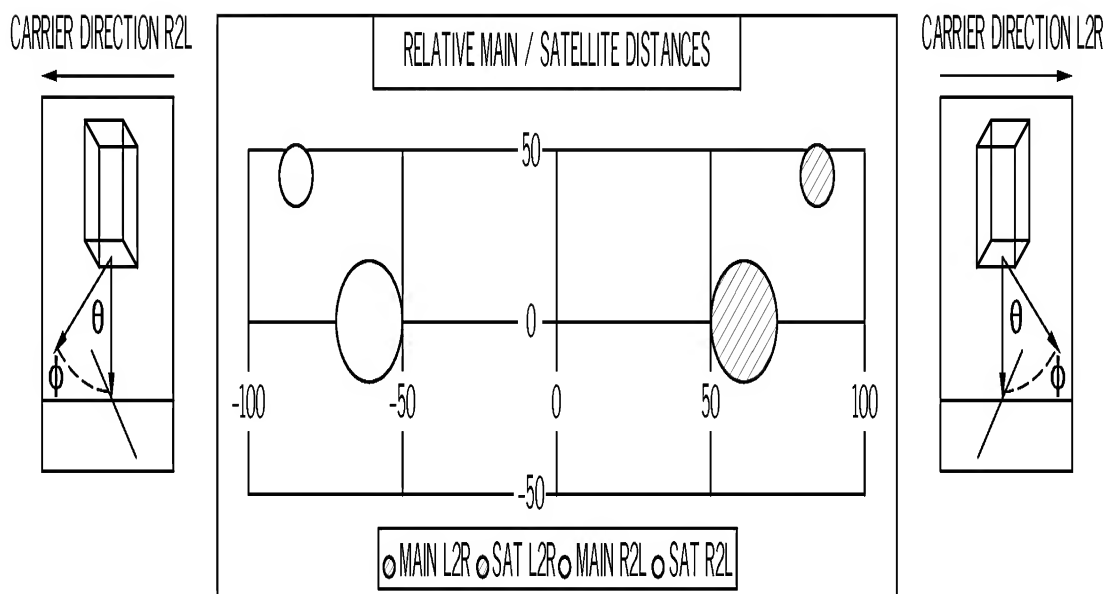


FIG. 20A

$$X \text{ MISPLACEMENT} = (GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)) + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		L2R		L2l		R2l	
	MAIN 1	SAT 1	MAIN 2	SAT 2	MAIN 1	SAT 1	MAIN 2	SAT 2
JET VELOCITY (ips)	500	360	500	300	500	300	500	360
Theta (DEGREES)	0	0	0	0	0	0	0	0
Phi (DEGREES)	0	180	0	180	0	180	0	180
X MISPLACEMENT (MICRONS)	80	103.3333	40	80	-40	-80	-80	-103.3333
x OFFSET	20	20	-20	-20	20	20	-20	-20
Y MISPLACEMENT (MICRONS)	0	0	0	0	0	0	0	0
y OFFSET	0	0	0	0	0	0	0	0

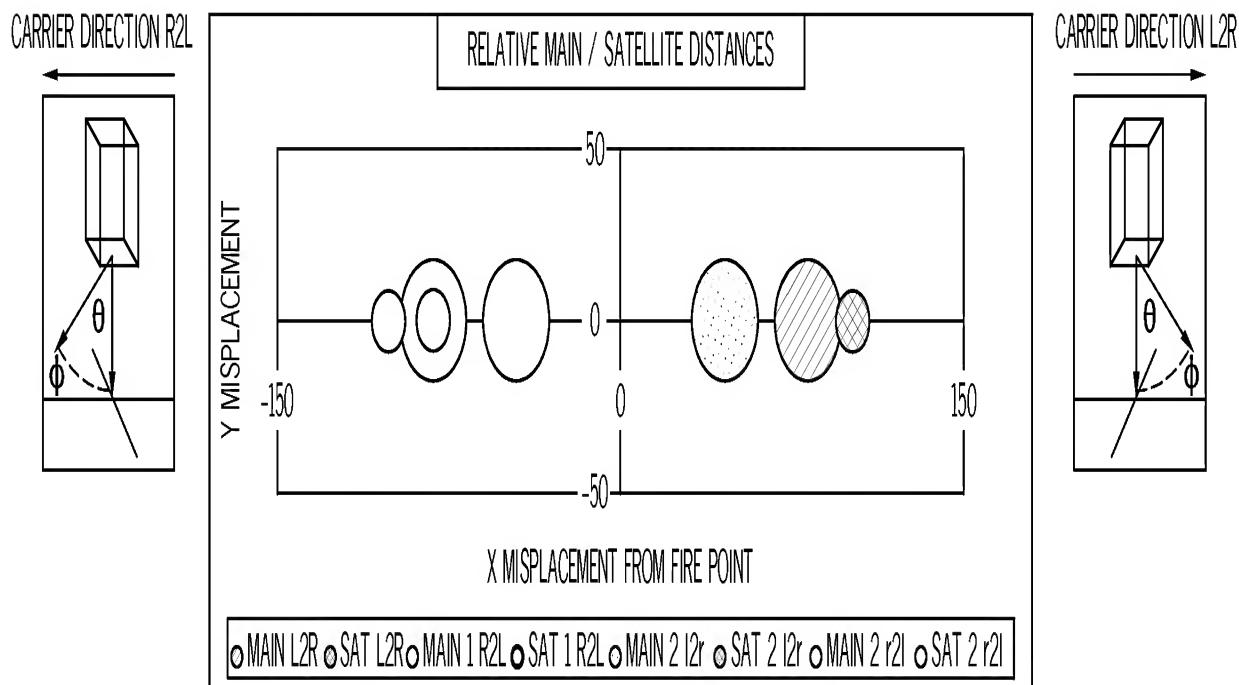


FIG. 21

R2L

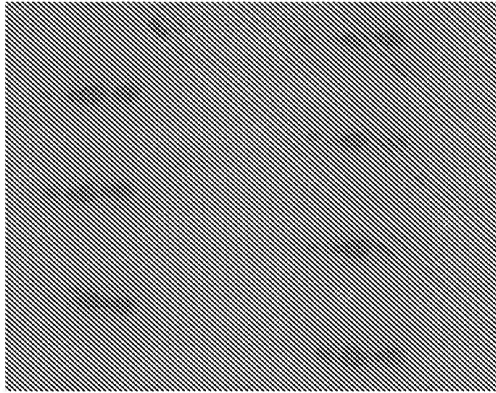


FIG. 22A

L2R

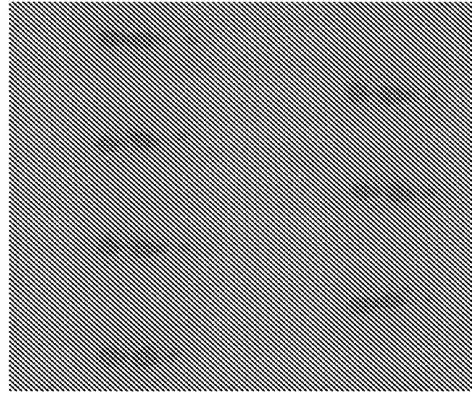


FIG. 22B

R2L

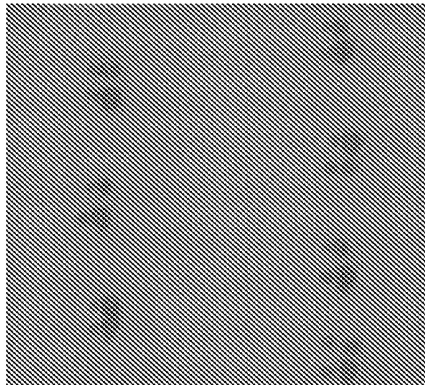


FIG. 24A

L2R

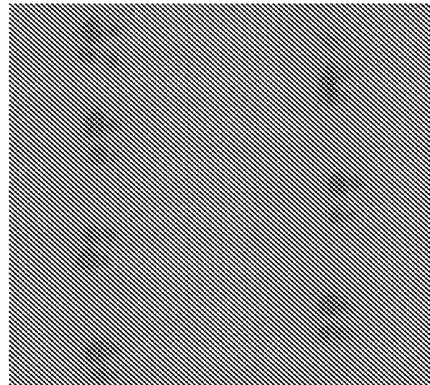


FIG. 24B

$$X \text{ MISPLACEMENT} = \{GAP * CARRIER \text{ VELOCITY} / JET \text{ VELOCITY} * \cos(\Theta)\} + GAP * \tan(\theta) * \cos(\phi) + \text{offset}$$

$$Y \text{ MISPLACEMENT} = GAP * \tan(\theta) * \sin(\phi) + \text{offset}$$

GRAVITY AND AIR TURBULENCE IGNORED

GAP (MICRONS) 1000

CARRIER VELOCITY (ips) 30

	L2R		L2R		L2l		R2l	
	MAIN 1	SAT 1	MAIN 2	SAT 2	MAIN 1	SAT 1	MAIN 2	SAT 2
JET VELOCITY (ips)	500	360	500	300	500	300	500	360
Theta (DEGREES)	0	0	0	0	0	0	0	0
Phi (DEGREES)	0	180	0	180	0	180	0	180
X MISPLACEMENT (MICRONS)	60	83.3333	60	83.3333	-60	-83.3333	-60	-83.3333
x OFFSET	0	0	0	0	0	0	0	0
Y MISPLACEMENT (MICRONS)	70	70	-70	-70	70	70	-70	-70
y OFFSET	70	70	-70	-70	70	70	-70	-70

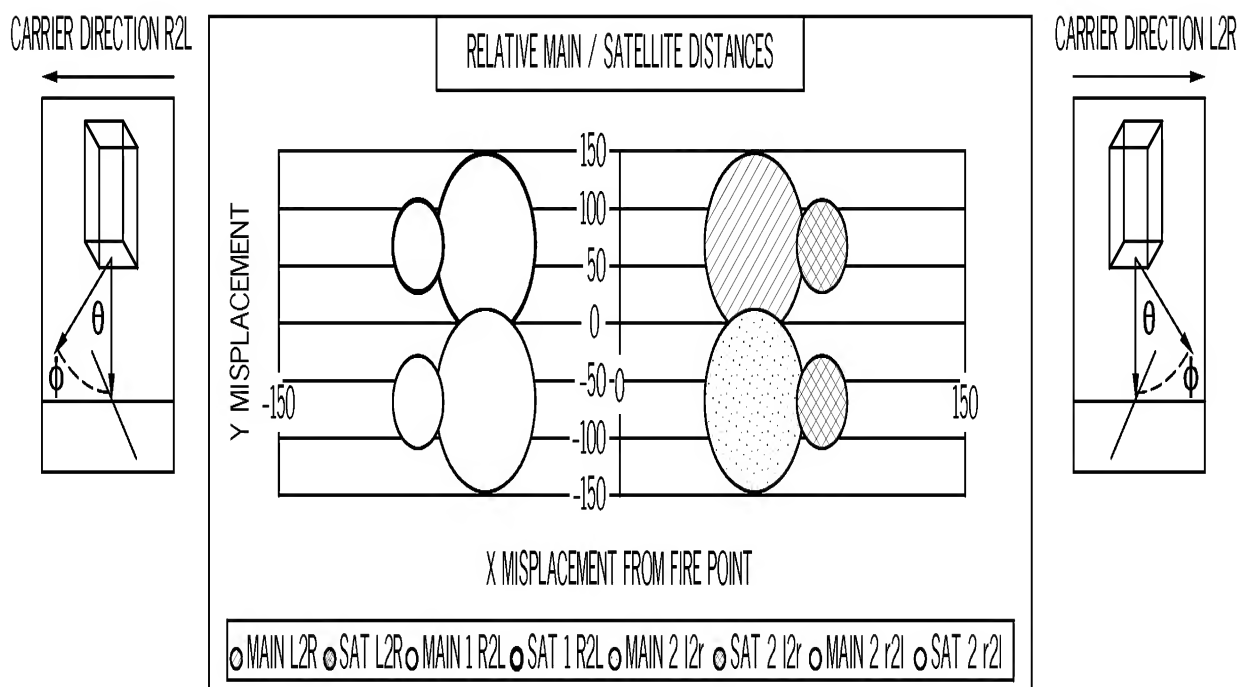


FIG. 23

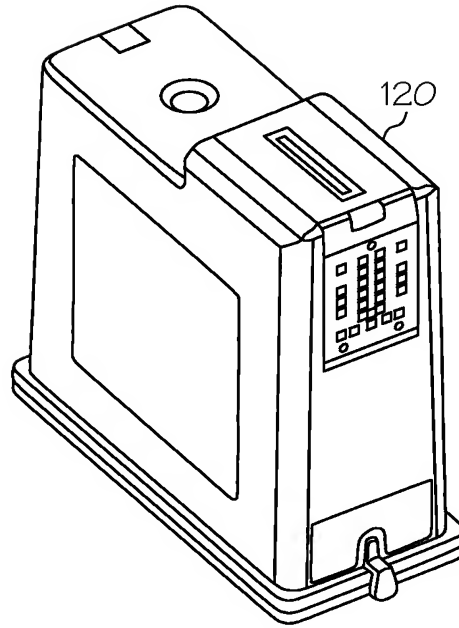


FIG. 25

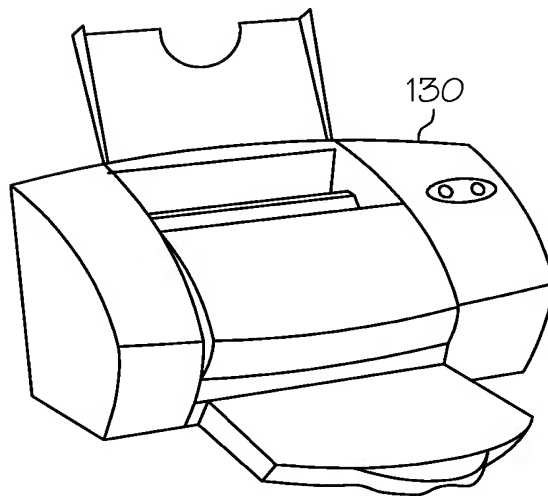


FIG. 26